EEB 0 3 5000 Approved for use through 10/31/2002. OMB 0851-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of Information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO				Complete if Known		
INFORMATION DISCLOSURE				Application Number	10/519,150	
				Filing Date	August 16, 2005	
ST	ATEMENT	BY APP	LICANT	First Named Inventor	FLEXMAN, ET AL.	
				Art Unit	2856	
	(use as many sheets as necessary)			Examiner Name	Not Yet Assigned	
Sheet	1 1	of	6	Attorney Docket Number	WRA0011-US	

				LO BATENT DO	CHAPME	
				J.S. PATENT DO	CUMENTS	
Exar er Initia	r als	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
L	AIV		US4,129,822	12/12/1978	Traficante	
			US4,568,880	02/04/1986	Sugimoto	
			US4,612,505	09/16/1986	Zijlstra	
			US4,628,264	12/09/1986	Rzedzian	
			US4,635,017	01/06/1987	Ries	· ·
			US4,724,389	02/09/1988	Hyde et al.	
			US4,956,609	09/11/1990	Miyajima	
			US5,041,791	08/20/1991	Ackerman et al.	
			US5,168,224	12/01/1992	Maruizumi et al.	
			US5,206,592	04/27/1993	Buess et al.	
			US5,233,300	08/03/1993	Buess et al.	
			US5,365,171	11/15/1994	Buess et al.	
			US5,414,357	05/09/1995	Kernevez et al.	
		-	US5,457,385	10/10/1995	Sydney et al.	
			US5,546,000	08/13/1996	Maas et al.	
			US5,583,437	12/10/1996	Smith et al.	
		_	US5,592,083	01/07/1997	Magnuson et al.	
			US5,594,338	01/14/1997	Magnuson	
			US5,680,047	10/21/1997	Srinivasan et al.	
			US5,804,967	09/08/1998	Miller et al.	
			US5,982,179	11/09/1999	Munsell et al.	
			US5,986,455	11/16/1999	Magnuson	
			US6,091,240	07/18/2000	Smith et al.	
			US6,194,898	02/27/2001	Magnuson et al.	
V			US6,208,136	03/27/2001	Smith et al.	

	FOREIGN PATENT DOCUMENTS									
Examiner Initials	Foreign Patent Document No.1 EP 0 365 065		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	To				
LMA			04/25/1990	National Research Development Corp.						
		GB 2 200 462	08/03/1988	National Research Development Corp.						
		GB 2 254 923	10/21/1992	British Technology		1				
		GB 2 255 414	11/04/1992	British Technology						
ΔV		GB 2 298 283	08/28/1996	Univ. of Queensland		1				
V		GB 2 319 086	05/13/1998	British Technology		7				

		,
Examiner	Date	
Signature	Considered	
O.g. lota. C	Considered	

^{*} EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 809. Draw line through citation if not in conformance and not considered, include copy of this form with next communication to applicant.

Applicant's unique citation designation number (optional).

See Kinds Codes of USPTO Petent Documents at www.uspto.gov or MPEP 901.04.

Enter Office that issued the document by the repeter code (WIPO Standard ST.3).

For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

Skind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible.

Applicant is to place a check mark here if English tanguage Translation is attached.



PTO/SB/08A (10-01)

Approved for use through 10/31/2002. OMB 0651-031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute	Substitute for form 1449A/PTO			Complete if Known		
INFORMATION DISCLOSURE				Application Number	10/519,150	
				Filing Date	August 16, 2005	
ST	ATEMENT	BY APP	LICANT	First Named Inventor	FLEXMAN, ET AL.	
				Art Unit	2856	
	(use as many sheets as necessary)			Examiner Name	Not Yet Assigned	
Sheet	2	of	6	Attorney Docket Number	WRA0011-US	

U.S. PATENT DOCUMENTS							
Examin er Initials	Cite No.1	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear		
LMA		US6,222,364	04/24/2001	Smith et al.			
		US6,242,918	06/05/2001	Miller et al.			
		US6,246,237	06/12/2001	Smith et al.	1:		
		US6,291,994	09/18/2001	Kim et al.			
\mathbf{V}		US6,392,408	05/21/2002	Barrall et al.			
V		US6,577,128	06/10/2003	Smith et al.			
		1	1	1	ì		

	FOREIGN PATENT DOCUMENTS								
Examiner Initials	Cite No.1	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶			
LMA		GB 2 319 852	06/03/1998	British Technology					
1_		JP 04-038495	02/07/1992	Hitachi, Ltd.					
		JP 04-064046	02/28/1992	Hitachi, Ltd.					
		JP 05-133911	05/28/1993	Hitachi, Ltd.					
		JP 05-209948	08/20/1993	JEOL		<u> </u>			
		JP 07-260719	10/13/1995	Yasuo					
		RU 2087920	08/20/1997	Urals Materials					
_ .	1		}	Scientific Tools Insti.					
		WO 01/06925	02/01/2001	The Johns Hopkins					
				University	1				
		WO 01/69276	09/20/2001	MRI Devices Corp.					
\sqrt{I}		WO 92/17794	10/15/1992	British Technology					
V		WO 92/21989	12/10/1992	British Technology		 			

Examiner	Date	
Signature	Considered ']

^{*} EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Applicant's unique citation designation number (optional).

See Kinds Codes of USPTO Petent Documents at www.uspto.gov or MPEP 901.04.

Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3).

For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible.

Applicant is to place a check mark here if English language Translation is attached.

Approved for use through 10/31/2002. OMB 0851-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB

control number. Complete if Known Substitute for form 1449A/PTO **Application Number** 10/519,150 INFORMATION DISCLOSURE Filing Date August 16, 2005 STATEMENT BY APPLICANT First Named Inventor FLEXMAN, ET AL Art Unit 2856 (use as many sheets as necessary) **Examiner Name** Not Yet Assigned Sheet 3 **Attorney Docket Number** WRA0011-US

			J.S. PATENT DOC	UMENTS	
Examin er Initials	Cite No.1	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
					
			 		
					·
					
					
					
			 		
					
					
		¬#-			
				7.00	
			-		
		·			
			<u> </u>		

FOREIGN PATENT DOCUMENTS										
Examiner Initials	Cite Foreign Patent Document No.1		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T°				
LMA		WO 93/11441	06/10/1993	British Technology						
		WO 96/26453	08/29/1996	British Technology						
		WO 96/30913	10/03/1996	Quantum Magnetics		Г				
NZ		WO 99/19740	04/22/1999	BTG International		Ì				
V		WO 99/45408	09/10/1999	BTG International						

Examiner	· · · · · · · · · · · · · · · · · · ·	Date		
	1			
Signature	1	Considered	1	
g		00.3.00.00	1	

^{*} EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered, Include copy of this form with next communication to applicant.

Applicant's unique citation designation number (optional).

See Kinds Codes of USPTO Petent Documents at www.uspto.gov or MPEP 901.04.

Enter Office that issued the document, by the two-lotter code (WIPO Standard ST.3).

For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible.

Applicant is to place a check mark here if English language Translation is attached.

Approved for use through 10/31/2002. OMB 0851-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB

Substitute for form 1449A/PTO				Complete if Known		
INIE	ORMATION DI	601	OCUBE	Application Number	10/519,150	
				Filing Date	August 16, 2005	
ST	ATEMENT BY A	APP	LICANT	First Named Inventor	FLEXMAN, ET AL.	
				Art Unit	2856	
(use as many sheets as necessary)				Examiner Name	Not Yet Assigned	
Sheet	Sheet 4 of 6		Attorney Docket Number	WRA0011-US		

		OTHER PRIOR ART NON PATENT LITERATURE DOCUMENTS				
Examiner Initiats No.1		Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publishe city and/or country where published. SINGSAAS ET AL., "QR-Based Personnel Screening Portal for Detection of Concealed Explosives," The Third International Aviation Security Technology Symposium, Tropicana Resort & Casino, Atlantic City, NJ, Nov. 27-30, 2001				
		HIRSCHFELD, "Short Range Remote NQR Measurements," Journal of Molecular Structure, Vol. 58, 1980, pp. 63-77				
		SHAW ET AL., "Quadrupole Resonance Scanner for Narcotics Detection," SPIE Cargo Inspection Technologies, Vo. 2276, 1994, pp. 150-154				
		RAMACHANDRAN ET At, "A Coherent Nuclear Quadrupole Pulse and Double Resonance Spectrometer," Journal of Physics E: Scientific Instruments, Vol. 16, 1983, pp. 643-648				
SHAW, "A Bri Resonance,"		SHAW, "A Brief (and Anecdotal) History of Explosives Detection Using Pure Quadrupole Resonance," The NQI Newsletter, Vol. 1, No. 3, March 1994, pp. 26-29				
		GONANO, "Nuclear Magnetic Resonance and Nuclear Quadrupole Resonance for Bomb Detection," Electro. Conf. Record, Vol. 4, 24-25 April 1979, pp. 1-5				
		SHAW, "Narcotics Detection Using Nuclear Quadrupole Resonance (NQR)," Contraband and Cargo Inspection Technology International Symposium, 28-30 October 1992, pp. 333-341				
		PETERSEN ET AL., "A Pulsed Nuclear Quadrupole Resonance Spectrometer," Advances in Nuclear Quadrupole Resonance, ed. JAS Smith, Vol. 1, 1974, pp. 179-184				
		CHEN ET AL., "A Three Dimensional Analysis of Slotted Tube Resonator for MRI, "IEEE Transactions on Medical Imaging, Vol. 13, No. 4, December 1994, pp. 587-593				
\forall		RAYNER ET AL., "Explosive Detection Using Quadrupole Resonance Analysis, SPIE, Vol. 2936, 1997, pp. 22-30				

Examiner	Date	
Signature	Considered	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.
 Applicant's unique citation designation number (optional).
 Applicant is to place a check mark here if English language Translation is attached.

PTO/SB/08A (10-01)
Approved for use through 10/31/2002. OMB 0851-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number. control number.

Substitute	for form 1449A/PTO			Complete if Known		
INIE	ORMATION DIS	201	OSLIBE	Application Number	10/519,150	
	•			Filing Date	August 16, 2005	
ST	ATEMENT BY A	\PP	LICANT	First Named Inventor	FLEXMAN, ET AL.	
				Art Unit	2856	
(use as many sheets as necessary)				Examiner Name	Not Yet Assigned	
Sheet	5	of	6	Attorney Docket Number	WRA0011-US	

000.		The state of the s			
<u>-</u> -		OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Initials No. (book, magazine, journal, serial, symposium, catalog, etc.), date, p city and/or country where publications of Second Explosives Detection Technology:		Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²		
		RAYNER ET AL., "Performance Trade-Offs in Quadrupole Resonance Analysis Screening," Proceedings of Second Explosives Detection Technology Symposium and Aviation Security Technology Conference, FAA Technical Centre, Atlantic City, NJ 1996, pp. 287-292			
		RAAD ET AL., "Optimization of NMR Receiver Bandwidth by Inductive Coupling," Magnetic Resonance Imaging, Vol. 10, 1992, pp. 55-65			
		PETERSEN, "Low Frequency NQR Matching Network," The NQR Newsletter, edited by R.A. Marino			
		NOBLE, "NQR for Bomb Detection," Analytical Chemistry, Vol. 66, No. 5, 1 March 1994, pp. 320A-324A			
	MARINO ET AL., "Multiple Spin Echoes in Pure Quadrupole Resonance," The Journal of Chemical Physics, Vol. 67, No. 7, 1 October 1977, pp. 3388-3389				
	LI ET AL., "A Novel Probe Design for Pulsed Nitrogen-14 Nuclear Quadrupole Resonance Spectrometer," Review of Scientific Instruments, Vol. 67, No. 3, March 1996, pp. 704-706				
	KLAINER ET AL., "Fourier Transform Nuclear Quadruole Resonance Spectroscopy," in Fouri Hadamard and Hilbert Transforms in Chemistry, A.G. Marshall, ed., Plenum, NY, 1982, pp. 1 182				
	BURNETT ET AL., "New Scanner Uses Quadrupole Resonance to Detect Narcotics and Explosives Hidden in Cargo," ICAO Journal, December 1995, pp. 14-15				
		BUTLER ET AL., "High-Power Radio Frequency Irradiation system With Automatic Tuning," Review of Scientific Instruments, Vol. 53, No. 7, July 1982, pp. 984-988			
		RAYNER ET AL., "Explosives Detection Using Quadrupole Resonance Analysis," Proceedings of Second Explosives Detection Technology Symposium and Aviation Security Technology Conference, FAA Technical Centre, Atlantic City, NJ, 1996, pp. 275-280			
\bigvee		BURNETT ET AL., "Quadrupole Resonance Explosives Detection: Past, Present and Future," Proceedings of the Second Explosives Detection Technology Symposium and Aviation Security Technology Conference, FAA Technical Centre, Atlantic City, NJ 1996, pp. 270-274			
Examiner Signature		Date Considered			

	·		······································
Examiner		Date	
Signature		Considered	
	1		

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered, include copy of this form with next communication to applicant.
 Applicant's unique citation designation number (optional).
 Applicant is to place a check mark here if English language Translation is attached.

Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute	for form 1449A/PTO			Complete if Known		
INIE	ORMATION DI	201	OSLIDE	Application Number	10/519,150	
				Filing Date	August 16, 2005	
ST	ATEMENT BY A	\PP	LICANT	First Named Inventor	FLEXMAN, ET AL.	
				Art Unit	2856	
(use as many sheets as necessary)				Examiner Name	Not Yet Assigned	
Sheet	6	of	6	Attorney Docket Number	WRA0011-US	

			Г				
Examiner Cite		Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), pubcity and/or country where published.					
LMA		BUESS ET AL., "Explosives Detection by ¹⁴ N Pure NQR," Advances in Analysis and Detection of Explosives, 1993, pp. 361-368					
		GEROTHANASSIS, "Methods of Avoiding the Effects of Acoustic Ringing in Pulsed Fourier Transform Nuclear Magnetic Resonance Spectroscopy, Progress in NMR Spectroscopy, Vol. 19, 1987, pp. 267-329					
		GARROWAY ET AL., "Explosives Detection by Nuclear Quadrupole Resonance (NQR)," SPIE, Vol. 2276, Cargo Inspection Technologies, 1994, pp. 139-149					
		GARROWAY ET AL., "Narcotics and Explosives Detection by ¹⁴ N Pure NQR," SPIE, Vol. 2092, Substance Detection Systems, 1993, pp. 318-327					
		HWANG ET AL., "Automatic Probe Tuning and Matching," Magnetic Resonance in Medicine, Vol. 39, No. 2, 1998, pp. 214-222					
		HORNAK ET AL., "Elementary Single Turn Solenoids Used as the Transmitter and Receiver in Magnetic Resonance Imaging," Magnetic Resonance Imaging, Vol. 5, 1987, pp. 233-237	С				
		HARDING ET AL., "A Pulsed NQR-FFT Spectrometer for Nitrogen-14," Journal of Magnetic Resonance," Vol. 36, 1979, pp. 21-33	Г				
		GIBSON ET AL., "Proton NMR and Piezoelectricity in Tetramethylammonium Chloride," Journal of Chemical Physics, Vol. 57, No. 11, 1 December 1972, pp. 4688-4693	С				
		·	С				
		·					

Examiner Signature	/Louis Arana/	Date Considered	10/25/2006

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.
 Applicant's unique citation designation number (optional).
 Applicant is to place a check mark here if English language Translation is attached.